1	Α.	It does not change my conclusion, which was based on the data filed by
2		***BEGIN PROPRIETARY END PROPRIETARY*** Therefore it does
3		not meet the FCC requirement to satisfy the self-provisioning trigger.
4		K.
5	Q.	HOW DOES THE ***BEGIN PROPRIETARY END PROPRIETARY***
6		RESPONSE TO STAFF DATA REQUEST NO. 2 THAT IT SERVES
7		MASS MARKET CUSTOMERS USING DLC IN ITS COLLOCATION
8		FACILITIES AFFECT YOUR CONCLUSION THAT ***BEGIN
9		PROPRIETARY END PROPRIETARY*** USES ITS SWITCHES TO
10		SERVE ONLY ITS ENTERPRISE CUSTOMERS?
11		
12	A.	***BEGIN PROPRIETARY END PROPRIETARY***
13		
14	Q.	AFTER PERFORMING THE NECESSARY ANALYSIS, IS THE SELF
15		PROVISIONING TRIGGER MET IN EITHER GEOGRAPHIC MARKET?
16		
17	A.	No. Only one CLEC, ***BEGIN PROPRIETARY END
18		PROPRIETARY*** appears to have met the self-provisioning trigger.
19		
20	PRO	VISION OF UNE-P
21		

19

1	Q.	ACCORDING TO YOUR ANALYSIS, MASS MARKET CUSTOMERS
2		ARE NOT BEING SERVED VIA UNBUNDLED SWITCHING. ARE THEY
3		BEING SERVED VIA OTHER METHODS?
4		
5	A.	Yes. According to information largely gleaned from Staff Data Request
6		No. 1, there are over 26,000 customer lines being served via resale, and
7		over 200,000 customer lines being served via UNE-P. While some of
8		these customers could be considered enterprise customers, it is likely to
9		be only a very small percentage since few enterprise customers would be
10		served via analog loops, and both UNE-P and resale are provisioned
11		solely via analog loops.
12		
13	Q.	ARE ANY CLECS SERVING THE MASS MARKET VIA UNE-P IN A
14		WIRE CENTER IN WHICH THAT CLEC IS COLLOCATED AND
15		OFFERING ENTERPRISE SWITCHING?
16		
17	A.	Yes. ***BEGIN PROPRIETARY ***END PROPRIETARY
18		
19	Q.	WHAT SIGNIFICANCE DO YOU PLACE ON THIS DATA?

Public Testimony of Kevin Mosier Case No. 8983 March 12, 2004

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- A. I believe that this offers additional evidence showing that the FCC was correct to reject enterprise switches in the impairment analysis, ²⁰ even if the switch serves a small number of mass market customers.
- 5 Q. IF A CLEC HAS ALREADY INCURRED THE EXPENSE OF
 6 COLLOCATION IN A WIRE CENTER TO SERVE ENTERPRISE
 7 CUSTOMERS VIA ITS OWN FACILITIES, WHY WOULDN'T THAT
 8 CLEC OFFER SERVICE TO MASS MARKET CUSTOMERS VIA ITS
 9 OWN FACILITIES AS WELL?
- 11 A. The likely reason is because it isn't cost effective for the CLEC to incur the
 12 additional cost of installing the equipment to enable the CLEC to
 13 aggregate analog loops at the Verizon wire center; as well as uncertainty
 14 regarding the viability of the proposed batch hot cut process. (See Case
 15 No. 8988) into an enterprise switch. Evidence indicates this is the case
 16 even if a CLEC has a significant number of mass market customers in that
 17 wire center.
- 19 Q. DOES YOUR TESTIMONY TAKE INTO ACCOUNT THE EFFECT OF
 20 THE MARCH 2, 2004 RULING OF THE UNITED STATES COURT OF
 21 APPEALS FOR THE DISTRICT OF COLUMBIA?

 $^{^{20}}$ TRO ¶ 508

Public Testimony of Kevin Mosier Case No. 8983 March 12, 2004

A. No, this testimony presents the conclusions regarding my analysis of the FCC TRO up to the filing date of March 5, 2004 but did not make any changes or adjustments as a result of the March 2, 2004 ruling of the Court of Appeals.

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6

STAFF CONCLUSIONS

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Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

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A. After reviewing and analyzing the data, it seems clear that mass market switching in Maryland is impaired, and that the elimination of UNE-P would leave a large number of residential and small business customers without a competitive option.

14

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

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15

17 A. A. Yes it does.

ATTACHMENT KDM-A

I hold undergraduate and graduate degrees in Business from the University of Central Oklahoma. In my current position, I prepare recommendations for this Commission on various telecommunications issues, including tariff revisions, promotions, and applications for Certificates of Public Convenience and Necessity, and provide testimony in Commission proceedings. I have previously provided testimony in Case Nos. 8853, 8862 and 8918.

Prior to this position, I worked as an Economist with the Arizona Corporation Commission ("ACC"). While there, I provided recommendations to the ACC on economic, financial, and policy issues in the electric and telecommunications industries. In the telecommunications field, I presented testimony in hearings on telecommunications issues and filed written testimony in the US West/Qwest merger case.

ATTACHMENT KDM-B

PROPRIETARY

Before the Federal Communications Commission Washington, D.C. 20554

IN THE MATTER OF)
Unbundled Access to Network Elements) WC Docket No. 04-313
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers) CC Docket No. 01-338

AFFIDAVIT OF KEVIN MOSIER

- I, Kevin Mosier, hereby make oath that the following facts, as set forth in this affidavit, are true to the best of my knowledge, information and belief.
- 1. I am over eighteen years of age, and am competent to testify and have personal knowledge of the facts as set out in this Affidavit.
- 2. I am an Economist III with the Telecommunications Division of the Staff of the Maryland Public Service Commission. My business address is 6 St. Paul Street, Baltimore, Maryland 21202.
- 3. I was a witness in Case 8983 before the Maryland Public Service Commission ("MDPSC") captioned In the Matter of the Implementation of the Federal Communication Commission's Triennial Review Order.
- 4. On March 12, 2004, I filed testimony in Case 8983 on behalf of the MDPSC Technical Staff.
 - 5. On March 16, 2004, the Maryland Public Service Commission stayed Case 8983.
- 6. I affirm that the above-referenced pre-filed testimony was drafted by me or under my supervision and is true and accurate.

7. I prepared portions of the Summary of the Maryland Public Service Commission Staff's Impairment Analysis filed in the above-captioned matter and reviewed the entire document. I affirm that the Summary accurately summarizes the testimony I prepared for Case 8983.

I hereby declare under penalty of perjury that the foregoing Affidavit signed this day of September, 2004, is true and correct to the best of my knowledge.

Kevin Mosier
Regulatory Economist
Telecommunications Division
Public Service Commission of Maryland
6 St. Paul Street, 16th Floor
Baltimore, Maryland 21202

STATE OF MARYLAND)	
)	TO WIT:
CITY OF BALTIMORE)	

I HEREBY CERTIFY that on this _____ day of September, 2004, before me, a Notary Public for said State and City, personally appeared the affiant and made oath in due form of law that the matters and facts hereinabove set forth are true to the best of her knowledge, information and belief.

NOTÁRY PUBLIC

My Commission Expires:

BEFORE THE PUBLIC SERVICE COMMISSION OF MARYLAND

IN THE MATTER OF THE IMPLEMENTATION OF THE FEDERAL COMMUNICATION COMMISSION'S TRIENNIAL REVIEW ORDER

* CASE NO. 8983

TESTIMONY

OF

FAINA KASHTELYAN

PUBLIC

ON BEHALF OF THE STAFF
OF THE
PUBLIC SERVICE COMMISSION OF MARYLAND

March 12, 2004

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INTRODUCTION AND PURPOSE OF TESTIMONY

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Q1. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

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- 5 A1. My name is Faina Kashtelyan. I am a Regulatory Economist in the
- Telecommunications Division of the Public Service Commission of Maryland.
- My business address is 6 St. Paul Street, Baltimore, MD, 21202.

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Q2. WOULD YOU STATE YOUR BACKGROUND AND EXPERIENCE?

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11 **A2.** My background and experience are included as Attachment A.

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13 Q3. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

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A3. The purpose of my testimony is to describe the analysis performed by Staff in response to the dedicated transport portion of the Federal Communications Commission's ("FCC") Triennial Review Order ("TRO"). The main areas this testimony will address are the definitions of dedicated transport, positions of the parties, Staff analysis and interpretation of the data, the process Staff used to

¹ In the Matter of the Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket Nos. 01-338, 96-98, 98-147, FCC 03-36 (Rel. August 21, 2003) TRO, ¶360.

perform its impairment analysis, and the conclusions Staff reached relative to the presence or absence of impairment for dedicated transport in Maryland.

STAFF'S CONCLUSIONS

Q4. WHAT DID YOU CONCLUDE AS A RESULT OF YOUR DEDICATED TRANSPORT EVALUATION AND IMPAIRMENT TEST?

A4. Staff concludes that there is insufficient evidence to overcome the FCC's presumptions of impairment. No routes were found that satisfy the FCC's self-provisioning trigger, where three or more competitive carriers each have deployed DS3 or dark fiber facilities on a particular route. Therefore, Staff concludes that DS3 and dark fiber dedicated transport continues to be impaired from the perspective of the self-provisioning trigger analysis.

No routes were found that satisfy the FCC's wholesale facilities trigger, where two or more competitive carriers each have deployed DS1, DS3, or dark fiber facilities on a particular route.² Therefore, Staff also finds impairment for DS1, DS3, and dark fiber dedicated transport from the perspective of the wholesale facilities trigger analysis.

² There was one route that could potentially satisfy the TRO wholesale trigger. This conclusion could be drawn if more supporting data is provided.

STATE'S ROLE IN THE PROCEEDING

Q5. WHAT ARE THE FCC FINDINGS WITH RESPECT TO DEDICATED TRANSPORT?

A5. At the national level the FCC found that Competitive Local Exchange Carriers ("CLECs") are not impaired without unbundled OCn level transport. Furthermore, at the national level, the FCC found that competitive carriers are impaired without access to dark fiber, DS3, and DS1 transport until a state determines that unbundled transport for a particular capacity is no longer required on a specific route.³

Q6. WHAT IS THE COMMISSION'S ROLE IN THE FCC's TRO?

A6. The FCC delegated to the states the responsibility to determine whether evidence exists to overcome the FCC presumption of impairment for dedicated transport. Verizon Maryland Inc. ("VMD" or "Verizon") has petitioned this Commission to examine two triggers. The "self-provisioning trigger," is met when three or more unaffiliated competing carriers have deployed dark fiber or DS3

³ TRO ¶ 359.

transport along a specified route¹ and satisfy conditions outlined in FCC Rules.³ The "wholesale facilities trigger," is met when two or more unaffiliated wholesale transport providers offer dark fiber, DS3 and DS1 transport on a generally available basis along a specified route. In future reviews the state may also be required to perform the "potential deployment test," which examines whether or not a specific DS1, DS3, or dark fiber transport route is suitable for "multiple competitive supply " based on certain economic and engineering factors along the specific route". States that conduct this review need only address routes for which there is relevant evidence in the proceeding that the route satisfies one of the triggers." The Commission is not required to perform the potential for self-provisioning analysis during this proceeding because no party has raised this issue.

DEDICATED TRANSPORT OVERVIEW

Q7. HOW DOES THE FCC DEFINE A ROUTE?

A7. The FCC defines a route "as a connection between wire center or switch "A" and wire center or switch "Z". If, on the incumbent LEC's network, a transport circuit from "A" to "Z" passes through an intermediate wire center "X", the

⁴ TRO, ¶ 405.

⁵ TRO, Appendix B

⁶ TRO, ¶ 410.

competitive providers must offer service connecting wire centers "A" and "Z" but do not have to mirror the network path of the incumbent LEC through wire center "X".

Q8. HOW DOES THE FCC DEFINE DEPICATED TRANSPORT IN THE TRO?

A8. The FCC defined dedicated transport as the "transmission facilities connecting incumbent LEC switches and wire centers within a LATA"

Q9. HOW HAS THE FCC'S DEFINITION OF DEDICATED TRANSPORT EVOLVED OVER TIME?

A9. In the UNE Remand Order, to the FCC defined dedicated transport as "incumbent LEC transmission facilities dedicated to a particular customer or carrier that provide telecommunications between wire centers owned by incumbent LECs or requesting telecommunications carriers, or between switches owned by incumbent LECs or requesting telecommunications carriers."

The FCC noted that incumbent LECs must provide access to transport capabilities and offer interconnection at technically feasible points for DS1, DS3,

⁷ TRO, ¶ 517.

⁸ TRO, ¶ 401.

⁹ TRO ¶ 365.

¹⁰ In the Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order, FCC Doc. No. 96-98, FCC 99-238 (Rel. Nov. 5, 1999). ("UNE Remand Order").

11 UNE Remand Order, ¶323.

and OCn facilities. The FCC reaffirmed that "the definition of dedicated transport set forth in the Local Competition First Report and Order¹² includes all technically feasible capacity-related services such as DS1-DS3 and OC3-OC96 dedicated transport services."¹³ The FCC modified its rules to "clarify that incumbent LEC must unbundle DS1 through OC192¹⁴ dedicated transport offerings and such higher capacities as evolve over time."¹⁵ The definition of dedicated transport set forth in the Local Competition Order has been modified to include dark fiber. "Dark fiber is unactivated fiber optic cable, deployed by a carrier, that has not been activated through connections to optronics that light it, and thereby render it capable of carrying communications."¹⁶ The latest definition of dedicated transport the FCC adapted in its TRO, in which the definition of dedicated transport is limited to include only "... those transmission facilities connecting incumbent LEC switches or wire centers within a LATA."¹⁷

Q10. WHAT DOES BACKHAUL MEAN AND HOW DOES IT DIFFER FROM DEDICATED TRANSPORT?

¹²In the Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, First Report and Order, FCC Doc. No. 96-98 & 95-185, FCC 96-325 (Rel. August 8, 1996). ("Local Competition Order")

Third Report and Order, ¶ 323.
 See Attachment FK-B – Transmission Facilities Hierarchy

¹⁵ UNE Remand Order, ¶323.

¹⁶ TRO, ¶381.

¹⁷ TRO, ¶ 365.

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A10. Backhaul occurs when a communications channel takes traffic beyond its destination and back. 18 In transport networks, backhauling is a technique used to reduce the expense of connecting remote facilities such as a collocation site to the CLECs own network and/or switch. The FCC acknowledges that CLECs use transport links including unbundled transport connecting ILEC switches or wire centers to carry their traffic to and from their end users. In this application. a CLEC transport facility between ILEC wire centers backhauls traffic even though ILEC facilities along the same route could be considered a dedicated transport circuit. "In order to access UNEs, including transmission between incumbent LEC switches or wire centers, while providing their own switching and other equipment, competitive LECs require a transmission link from the UNEs on the incumbent LEC network to their own equipment located elsewhere. Competitive LECs use these transmission connections between incumbent LEC networks and their own networks both for interconnection and to backhaul traffic."19

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Q11. WHAT IS VMD'S VIEW OF DEDICATED TRANSPORT?

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A11. VMD defines dedicated transport as "facilities dedicated to a particular customer or competitive carrier that it uses for transmission among incumbent LEC cen-

¹⁹ TRO, ¶ 365.

¹⁸ Newton's Telecom Dictionary, 17th Updated and Expanded Edition

tral offices and tandem offices."²⁰ This is a partial quote of the definition of transport found in ¶361 of the TRO. The FCC continued this statement to add that "competing carriers generally use interoffice transport as a means to aggregate end-user traffic to achieve economies of scale. They do so by using dedicated transport to carry traffic from their end users loops, often terminating at incumbent LEC central offices, through other central offices to a point of aggregation. ...[T]he traffic is carried to the competitor's switch or other equipment..."²¹

Q12. WHAT IS THE CLECS' VIEW OF DEDICATED TRANSPORT?

A12. CLECs define dedicated transport as "the unswitched connection between two incumbent buildings."²² Following the CLEC's rationale, dedicated transport must be offered between two wire centers in question without an intervening switch. In addition, the specific type of transport must be defined not only in terms of the capacity of the route, but also in terms of the type of traffic that is being transported along the route.

Q13. HOW DOES STAFF VIEW DEDICATED TRANSPORT?

²⁰ VMD Testimony, p.30

²¹ TRO. ¶ 361.

²² AT&T Testimony, p. 83. This is AT&T's definition of dedicated transport and appears to be representative of other CLECs.

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A13. The terminology that is used in discussions regarding transport is as much an art as it is a science. For purposes of simplicity, dedicated transport means that a transport facility carries dedicated traffic from one point in a network to another point in a network. The route may or may not pass through an intermediate wire center, and if it does it would not be connected to a switch in that intermediate wire center. If it did connect to a switch in the intermediate wire center it would no longer be considered to be dedicated transport, but would be considered to be switched transport. The FCC defines dedicated transport as the connections between the incumbent LEC's switches or wire centers. A switch is "a mechanical, electrical or electronic device which opens or closes circuits, completes or breaks an electrical path, or selects paths or circuits". ²³ A switching center is an End Office or Central Office, a building within which a switch is located with other equipment. Hence, the term switching center may sometimes be interchanged with the term central office to imply the same meaning. The term switch is often used in the context of wire center or central office to mean a place or a building where the switch-device is located and may be used interchangeably with the term central office. In its definition of dedicated transport, the FCC used the term "switches and wire centers."24 Staff interprets the term switches in the context of the FCC's TRO to imply "switching Consequently, Staff's definition for dedicated transport is those center".

²⁴ TRO, ¶ 366.

²³ Newton's Telecom Dictionary, 17th updated and Expanded Edition

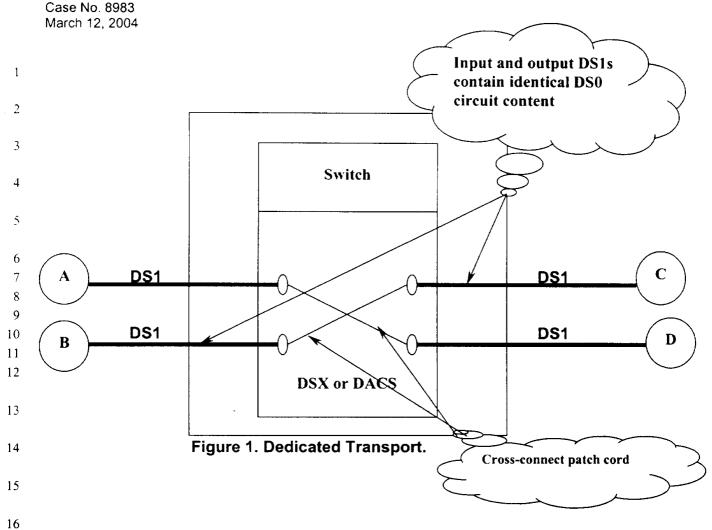
transmission facilities that connect incumbent LEC switching centers and wire centers.

ì

Q14. HOW DOES SWITCHED TRANSPORT DIFFER FROM DEDICATED TRANSPORT?

A14. There are two ways the traffic may be handled when it reaches a wire center, which are depicted in figures 1 and 2. Figure 1 depicts dedicated transport, which provides a two-point transmission path on a directly connected basis and where there is no switching interposed along the transport route. Figure 2 depicts switched transport, which is the transmission of traffic, which passes through an intermediary device – a switch. Figure 1 demonstrates nodes on a network A, B, C, and D, which are connected via a route. The traffic is carried over a DS1 facility from location A to location D, for example. DS1 facilities connected via DSX or DACS²⁵ would have the potential to be considered dedicated connections by the token that there would be no circuit switching performed on these routes. The dedicated transport is characterized by DS1 circuits that are not interrupted by a switch along the A to D route.

²⁵ DACS – Digital Access and Cross-connect System, the manual equivalent a digital switching device for routing and switching T-1 lines, and DS0 portions of lines, among multiple T-1 ports. A DACS is in essence a **MANUAL** equivalent of a T-1 switch that does not consider or operate based on the circuit content.

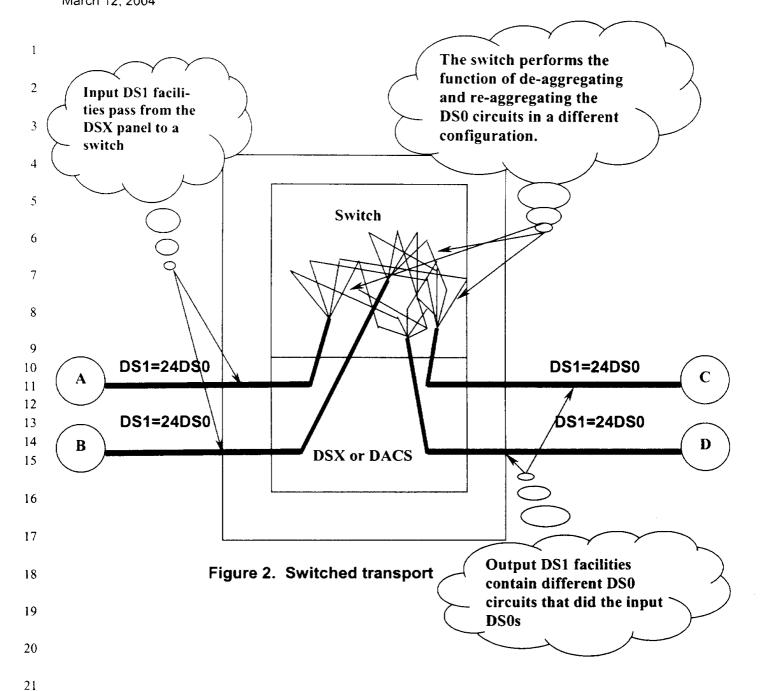


In Figure 2 input DS 1 facilities from A or B enter the DSX or the DACS panel in a wire center, which then connect the facilities to a switch. In the switch the DS1 is de-aggregated to 24 individual DS0 circuits and is re-aggregated back into a DS1. Output DS1 facilities to C and D contain different DS0 circuits than the input DS1s.

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For simplicity I illustrated an example of electrical digital facilities, however, for fiber-optic systems, the architecture and the concept are the same. The difference is in the nomenclature used. For example, instead of DS1 facilities, there

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could be OC12 facilities connected via a fiber patch cord at an LGX (light guide cross-connect) panel which is the fiber equivalent of an electrical DSX panel.

It is important to note that it doesn't matter whether the DSX or DACS is used, if the circuit resides on the DSX or DACS and is not interrupted, it could be considered dedicated transport. However, if a circuit in any way touches the switch, it should no longer be considered dedicated. It is also important to note that with a DACS it is possible to get the rearrangements like one would expect from passing through a switch, yet the circuit is never interrupted and thus is still dedicated.

Q15. WHY DOES STAFF BELIEVE THAT SWITCHED TRANSPORT DOES NOT QUALIFY FOR THE FCC TRIGGER ANALYSIS WHEN IN FACT THE FCC ALLOWS FOR BOTH SWITCH AND WIRE CENTER CONNECTIVITY?

A15. Staff believes that FCC used the term "switch" in the context of "switching center", and therefore, the use of the term "switch" in its definition of dedicated transport is synonymous with the term "wire center". If a transport route is interrupted by at least one switch, it is no longer considered dedicated because the traffic after passing through a switch will not flow via the same circuits as it did before it entered the switch. Therefore, switched transport should not be considered in the dedicated transport impairment analysis.

Q16. WHY WOULD A CARRIER CHOOSE TO USE SWITCHED TRANSPORT IF DEDICATED TRANSPORT IS LESS EXPENSIVE?

A16. If a carrier does not have large economies of scope and scale the carrier would chose to utilize switched transport. A carrier may not have enough customers in each location to utilize fully the capacity of dedicated facilities. Therefore, a competitive carrier will choose to collect and aggregate traffic from different locations to backhaul the traffic to its own switch.

Q17. WHY DOES VMD USE DEDICATED TRANSPORT IF SWITCHED TRANSPORT IS SO MUCH MORE FLEXIBLE?

A17. VMD uses dedicated transport because it benefits from large economies of scale and scope that few if any competitive carriers enjoy. VMD has large volumes of customers that justify the use of dedicated facilities because those facilities will be used at their full capacity.

Q18. WHEN DOES IT MAKE SENSE FOR A CARRIER TO USE DEDICATED TRANSPORT RATHER THAN SWITCHED TRANSPORT?

PUBLIC Festimony of Faina Kashtelyan

Case No. 8983 March 12, 2004

A18. CLECs consider a number of factors, when deciding which type of transport to use. A carrier considers the size of trunk routes, the volume of traffic, how many nodes it has in its network, and the availability of affordable facilities between nodes on its network. To determine affordability of facilities, a carrier has to evaluate whether it is more economical to build its own fiber routes, pick up traffic from several collocations and backhaul it to its switch than to lease UNE-P arrangements. A CLEC evaluates all its options before it makes any kind of business decision, which is driven by the costs each carrier faces in a market.

Q19. DOES STAFF AGREE THAT THE PRESENCE OF FIBER FACILITIES IN MULTIPLE LOCATIONS IS INDICATIVE OF A CLEC'S ABILITY TO PROVIDE DEDICATED TRANSPORT BETWEEN THOSE POINTS?

A19. No. Verizon claims that if "there are fiber-based facilities in two Verizon wire centers in a LATA, it is very reasonable to assume that those fiber facilities are part of a CLEC-operated ring and that traffic can be routed from one Verizon wire center to the other. It is also reasonable to assume that these CLEC-operated fiber rings connect to the CLEC's POP, and that traffic can flow to and from all parts of the carrier's network through the POP." Staff disagrees with Verizon. Although a physical fiber path between two points (A and Z) may exist,